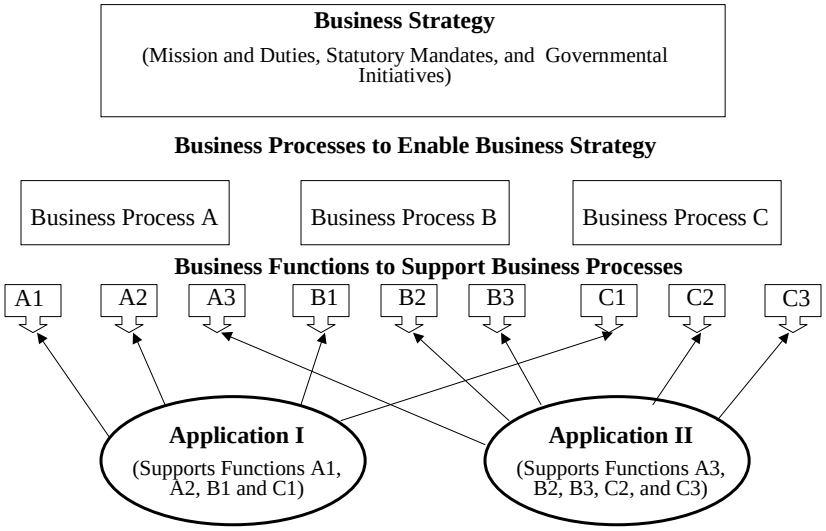
Definition of an Application

An application may be defined as a computer system (potentially including multiple programs, modules, etc.) that is designed to accomplish operational tasks or functions that help a user perform his or her work." The point of this material is to elaborate upon this definition to explain more clearly what is an application from the point of view of the application portfolio management initiative. Three perspectives (business view, business/IT alignment view, and technical view) may be helpful, and these are illustrated below.

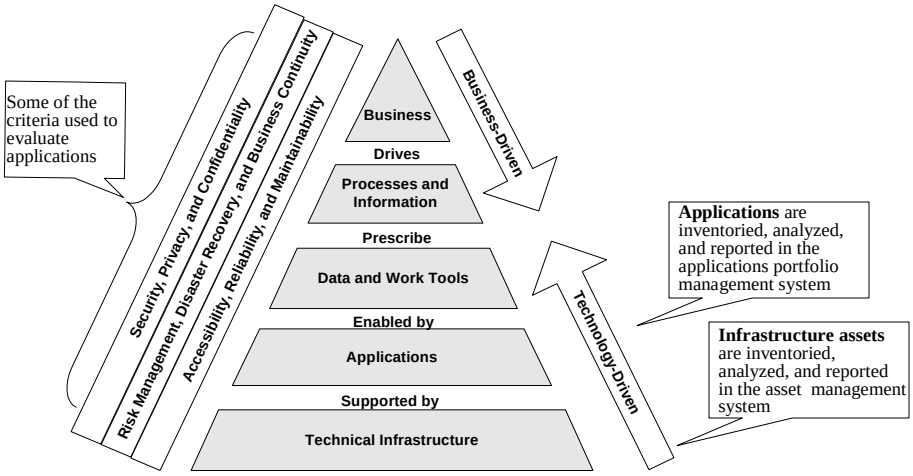
The following diagram illustrates the business view of an application.

Definition of an Application – Business Support View



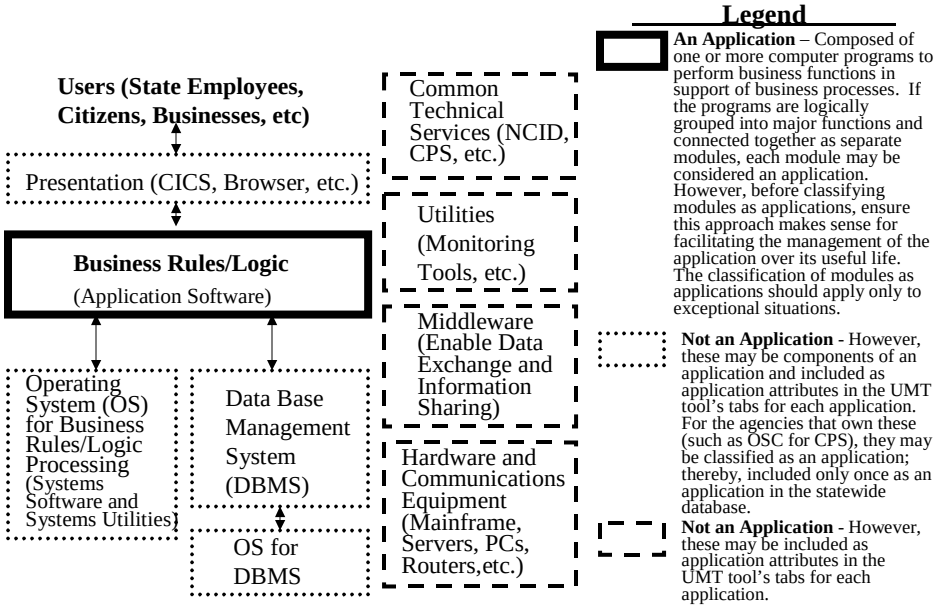
The business/IT alignment view is depicted as follows:

Definition of an Application – Business / IT Alignment View



The diagram below illustrates the technical architectural view of an application.

Definition of an Application - Technical Architectural View



While a multitude of different types of computer programs (software) and equipment components (hardware) can be included in or support an application,

the applications portfolio management activity focuses on the application software as the primary inventory item. This is similar to the business case and project being the inventory items for investment portfolio management and project portfolio management activities, respectively.

Even though primary attention is given to the application and its associated software that directly supports business processes and their associated business functions, the analyses and evaluations of applications and the decision making processes for managing them include the collection and review of attributes for their supporting hardware and software components. In addition to identifying the part – business rules and logic (application software) – that is the focus of study, the technical view above shows representative technical components that are cataloged and analyzed as part of the evaluation of an application. For example, while the main identity is the application software itself, the UMT tool will keep data about its associated operating system, DBMS, hardware type, technical services it uses, etc. Characteristics of the technical components that support the business rules/logic software are reviewed as part of the overall analysis of the application.

An application may be very large and complex, so that it may be technically and logically organized into major modules to process more involved business functions. Since these bigger applications may be composed of a collection of closely coupled groups of computer programs to perform interrelated business activities, the question often arises as to whether these applications should be inventoried, evaluated, and managed as one or as individual modules. This is a tricky question, and an approach toward addressing it may be to focus on two criteria, described below.

- **How will the application be managed over its useful life?** Will it be renovated, technically or functionally enhanced, consolidated, or replaced as a whole or as individual modules? Is it easier and simpler to review its financial, operational, technical, and business status and plan for its future from a module or whole perspective? How does the business management look at it (by module or as a whole), especially if requesting additional funds to renovate or replace it?

- **What is the most efficient and effective way to collect and analyze data about it and its supporting hardware and software components?** Modules mean more inventory items, more data attributes to collect and maintain, more analyses to perform, and more plans to make. Costs may be the determining element, as costs per module may be difficult to collect.

A question frequently arises as to what applications to include in the UMT database for ongoing analyses and management. A general rule is all operational applications that merit periodic review and determination of

approaches for short- and long-term management actions should be included. The following items deserve elaboration in making this decision:

- Age – How old or young an application is should have no bearing on whether to included it in the applications portfolio management process. More mature applications may present cost or risk issues. Applications that have been recently implemented or partially implemented (if the implementation project is a phased one or using a phased rollout) should be included, as these may offer opportunities for providing more value or better benefits with cost-effective enhancements, as well as present unique risk problems. In fact, a part of the project closeout procedure is to add the application to the application portfolio management database in the UMT tool.

- Size – Diminutive size or narrow scope of use are not (by themselves) restrictive considerations for determining whether to include applications in the portfolio management inventory. Small applications supporting a limited number of users should be considered for inclusion. While appearing to be insufficient, the smaller applications may be extremely important to the agency or governmental program, and they may not be adequately managed if excluded from the applications portfolio management process. A PC-based computer program employing an Access database and having a user base of one or few people may fit the definition of an application.

  However, applications licensed through statewide enterprise contracts and related more to office automation or personal productivity than to the support of business processes or functions of governmental programs should be excluded from applications portfolio management. Examples of these applications include products from Microsoft, such as Word and Excel, and they and their contracts will be inventoried and managed through a separate asset manage initiative. The asset management inventory will include these software items, as well as infrastructure hardware (such as PCs, servers, laptops, communications equipment, etc.).

- Criticality to agency operations – An application does not have to be mission-critical to be included. In fact, the vast majority of applications are important, but not of the highest critically. These less vital applications also deserve to be inventoried, analyzed, and managed, because they represent significant initial and ongoing financial commitments and offer potentially serious exposures for operational, technical, security, and business risks.

Additional Guidelines

- **Versions**: It is not recommended to track versions of applications separately. As applications are upgraded/enhanced, new version information can be captured in the *Latest Release* and *Release Notes* fields and any associated technical attributes.
- **Productivity Tools**: Generally, individual spreadsheets and desktop databases are not applications, except in cases where these tools are crucial in routine processes. In that case they can be tracked at the agency's discretion. Some suggested guidelines for tracking these tools as applications might be if they:
    - Directly contribute to a business process or support business function(s)
    - Are actively supported by the systems community
    - Act as an automation link among applications
    - Incur significant support costs